

WHAT IS CLAIMED:

1. A system comprising:

5 an automated interactive acquirer of data comprehensively descriptive of a particular system;
a data processor; and
a reporter to report the conclusions of the data processor.

10 2. The system of Claim 1, where the system comprehensively described is the medical state of a human being.

15 3. The system of Claim 2, where the data processor implements a clustering generation algorithm.

4. The system of Claim 3, where the cluster generation algorithm finds a cluster of other human beings medically similar to the human being.

20 5. The system of Claim 4, where the data processor operates on the generated cluster to generate useful medical information for the human being.

6. The system of Claim 4, where the data processor implements an algorithm that measures medical similarity.

25 7. A method comprising:

comprehensively describing a system in terms of a basis set of fundamental attributes of the system;

measuring the distance between the system so described and all other systems similarly described in a database of such systems; identifying the cluster of closest other systems within the database; and analyzing the cluster of closest other systems

5 for information useful to improving the system's attributes.

8. The method of Claim 7, where the system analyzed is the human being's medical state.

10 9. The method of Claim 8, where the number of other systems in the cluster is set dynamically.

10. The method of Claim 9, where the number of other systems in the cluster is determined by means of comparing the moving average of the incremental increases in the medical distance with each added other system to a threshold.

15 11. The method of Claim 10, where the analysis of the cluster results in useful medical information for the human being.

20 12. The method of Claim 11, where the distance between the systems in the database is a measure of medical similarity.

13. A method of expressing a human being's medical state as a multidimensional vector in a hyperspace comprising:

5 articulating a comprehensive description of the human being using a specialized taxonomy; and

mapping the articulation to a vector in hyperspace whose components are numbers indicating (1) a measure of the presence or (2) the absence of each of a set of medical attributes.

10 14. The method of Claim 13, where the numbers vary between zero and an integer upper bound.

15 15. A method comprising:

encoding a comprehensive description of a human's medical state to a set of numerical values.

16. The method of Claim 15 where each of the numerical values represent a measure of the presence or the absence of a unit vector in N dimensional space.

20 17. The method of Claim 16, where N equals three.

18. The method of Claim 17, where each three dimensional unit vector is a unique coincidence of:

25 a bodily system identifier;

an identifier of a medical condition or pertinent fact; and

a identifier of anatomical location.